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not sufficiently extended -

Inaugural Dissertation

on the

Dated March 1828

Medical Properties

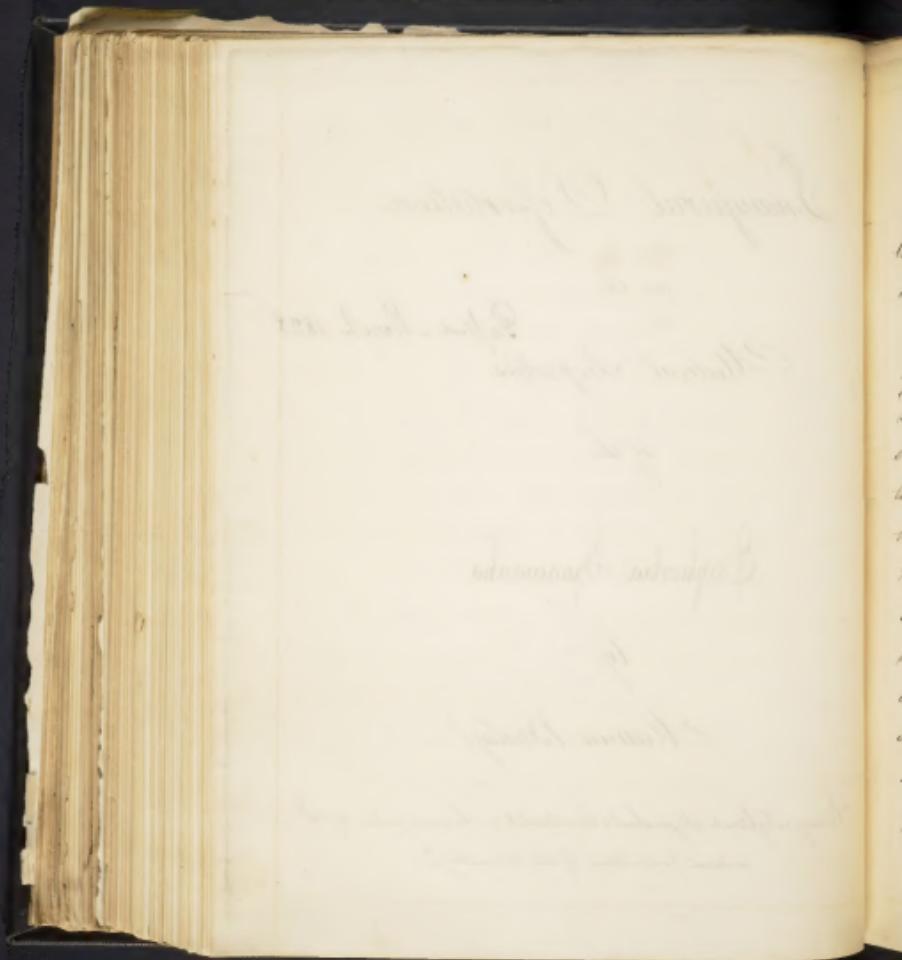
of the

Euphorbia Ipecacuanha

by

Maurice Wesley

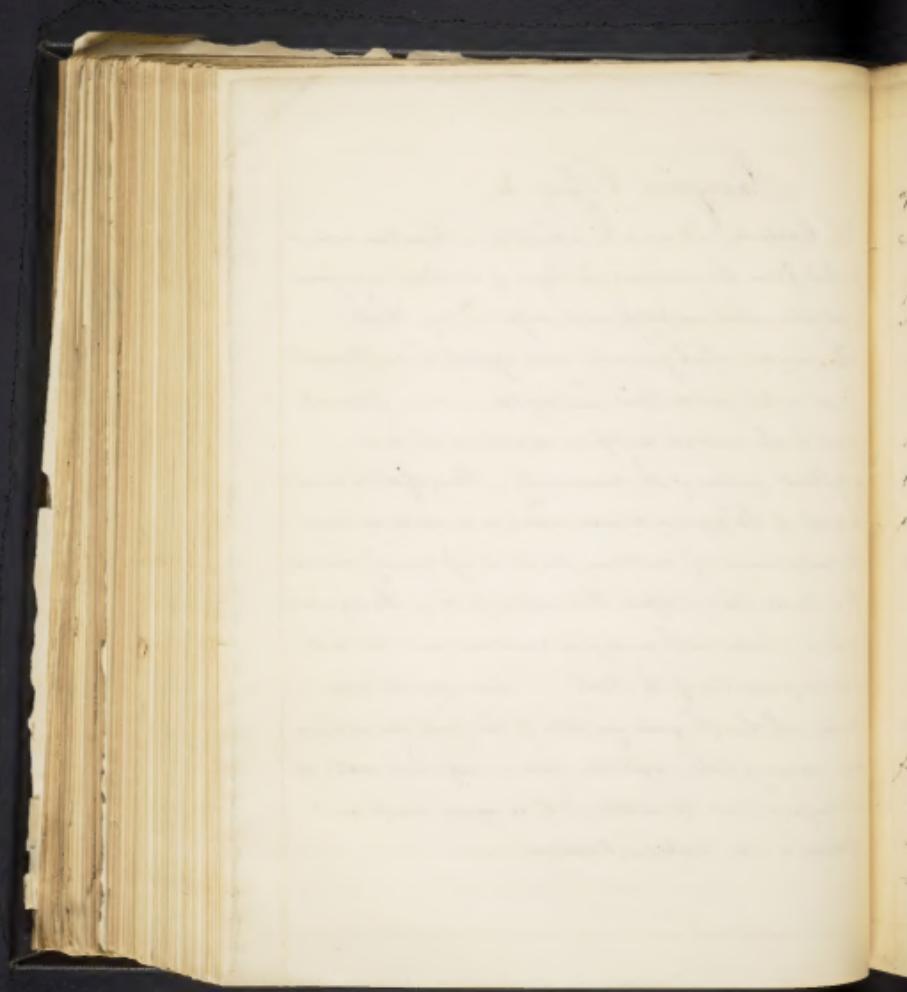
Every enlightened citizen should be interested in the examination of the
natural productions of his Country.



Inaugural Essay &c.

The *Euphorbia Speciosa* is the plant I have been induced to select from the numerous catalogues of important indigenous vegetables which we propose as the subject of my thesis.

The prejudice which generally exists against the employment of our native productions, has long been a source of serious regret to the medical profession, as well as to the more enlightened portion of the community. Every effort to subvert the effects of this popular delusion, which so evidently obstructs the improvement of medicine, should be strenuously resorted to. Under this impression the practical part of this description will be related with an eye to candour and not to the superior properties of the plant. I leave for the cases to decide whether the good qualities of this truly amorphous and varying little vegetable bear a sufficient ratio to its imperfections, to entitle it to a more conspicuous station in the *Materia Medica*.



The genus *Euphorbia*, according to Dioscorides, was so named after *Euphorbas*, physician to *Nida*, King of *Sybaris*.

It is arranged by the celebrated Linnaeus in the class *sibyllaria* — and order *monogynia*; and by Willdenow and Nattall in the class *monocotyledonae* — order *monodelphiae*.

Generic character.

Indumentum caliciforme 5 to 10 toothed alternate dentition, glandular or petioloid; *Flowers* insipid 12 or more, rarely 1, *female* flower, central, naked solitary, stipitaled. *Style* 3-lobed — *Stell.*

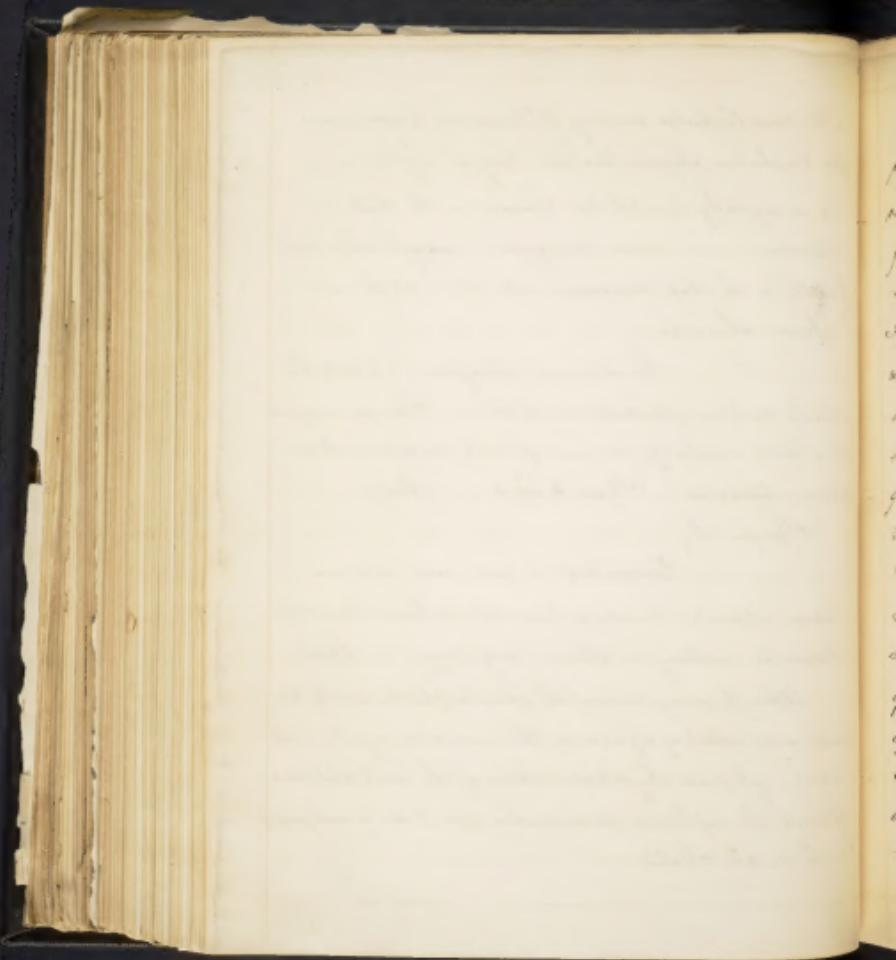
Specific char.

Procam. bristly or semi-cord. glabrous;

Leaves, opposite, obovate or lanceolate, or linear lanceolate;

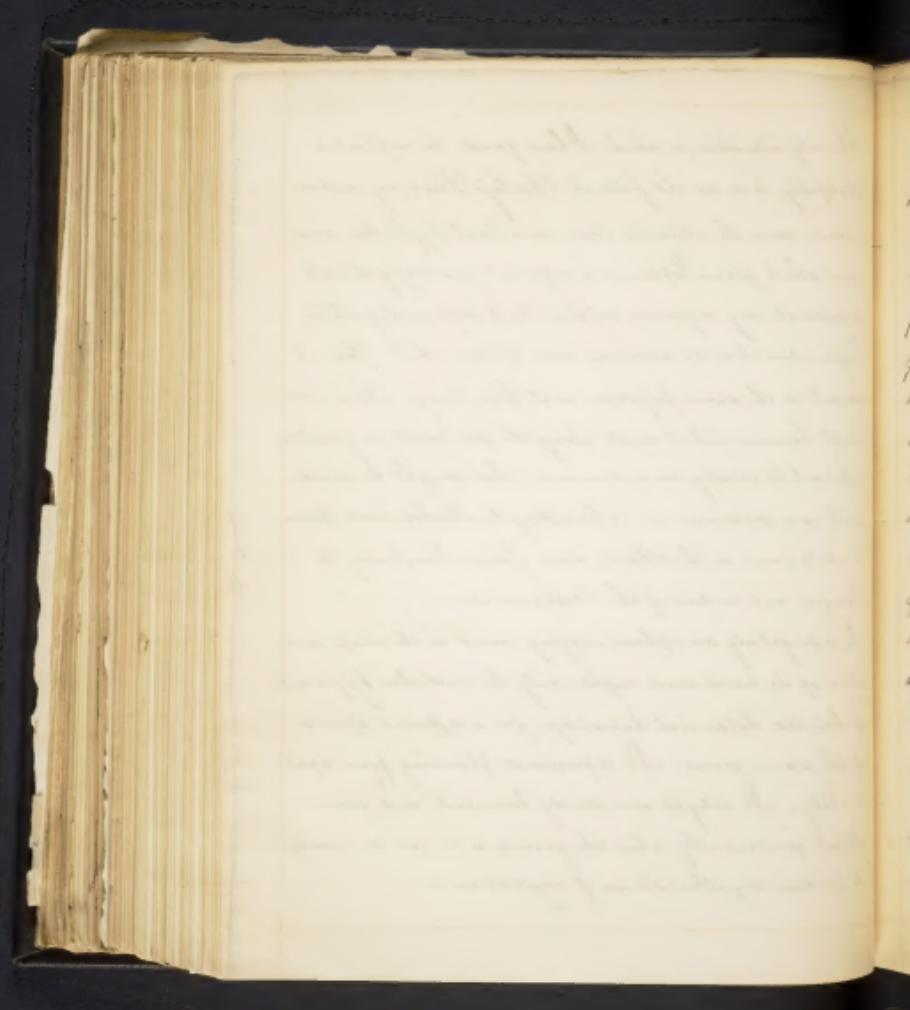
Peduncles, axillary on flowered, very long; — *Bast.*

Although, many species of the genus *Euphorbia* are to be found in the deserts of Africa, in China and many parts of Europe, yet from the representation of the most celebrated botanists, the *Euphorbia heteracantha* is exclusively indigenous to the United States.



The only situation in which I have found the euphorbia
plentifully, is in an old field at Basley's Point, my native
residence, near the Atlantic Ocean and Great Cyparissus river;
from which place I obtained a sufficient quantity of the root,
to prosecute my inquiries relative to its medicinal qualities;
I again saw it in an excursion near Salem N.H. Here it
was not in the same proportion as at Cape May. There is no
doubt however but it exists along the sea coast in quantities
sufficient to satisfy every demand that might be made
for it as a medicine. According to Michaux and Barton
it is to be found in the Atlantic states from New Jersey to
Georgia, and in some of the Western states.

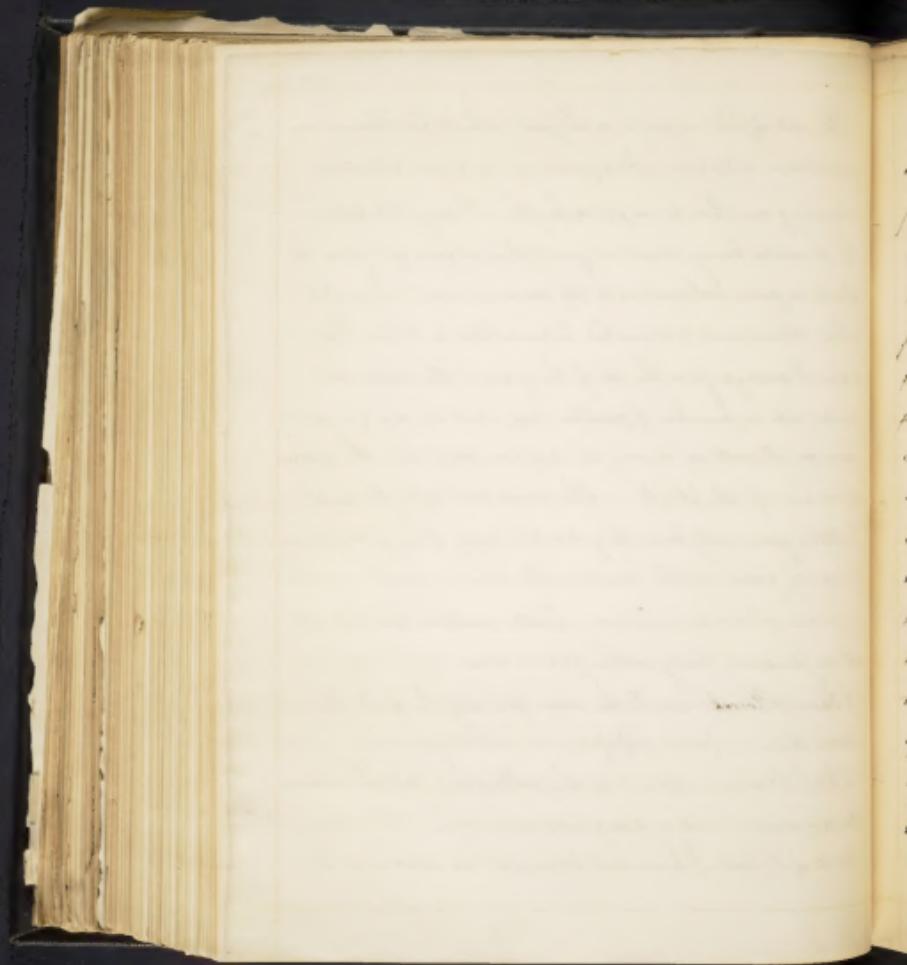
It is singularly amorphous, varying much in the shape and
color of its leaves, and might easily be mistaken by persons
of limited botanical knowledge, for a different species
of the same genus. It is perennial flowering from April
to July. It delights in a sandy loam soil, and grows
almost spontaneously where the ground is so poor as scarcely
to produce any other species of vegetation.



The root of the euphorbia is the part which has claimed my particular attention. It is perennial as before observed varying from three to six feet in length, with very little taper; the diameter being almost as great three or four feet from the plant in some instances as at its commencement. It is of a yellow colour, and is somewhat tuberculated in places. Just before it emerges from the top of the ground, the main root divides into a number of smaller ones, about the size of a quill; these small roots on leaving the surface, constitute the cylindrical appearance of the plant. The dried root is light and brittle, generally consisting, particularly if an old specimen, of woody fibers in the center. Its colour greyish - rather a cream colour on fracture. Taste sweetish but not at all unpleasant, being rather farinaceous.

Baron Storck and Parker were probably the first to observe that our plant possesses an emetic quality - P. S. Barton notes it in his collections, but he chooses to condemn it as a dangerous remedy - Bigelow speaks of it, but I have not been able to ascertain his

why)



conception of it as a medicine, or that supposed to obtain
composition to be a substance of the nature of a cathartick;
stable in ether but not in alcohol; & as it is a water,
I'm certain I can draw a something similar to it, cannot
be doubted - as to extraction between the water of the milk
juice which tends even to prevent the formation of the gall
etc. it is converted into a substance much allied in its
sensitive properties to emulchines.

A circumstance worth of remark I experienced whilst engaged
in my experiments which you are in a manner to prove that the
mineral principle exists to a considerable degree in the milk
emulsion as well as in the secretion. I thus comprehend
vegetable emulsions. Having collected a quantity of the
root for the purpose of examining the object of my theory, anxious
to try my experiment, I was washed in water that I might be certain
of the dirt which adhered to it; in the water soon went milky
by this process was poured off and rapidly quieted up by a
flock of rabbit gear that were taken along the gutter.
The consequence was in a few minutes afterwards a perfect



expulsion of this noise, violent disengagement resulting so much
as they were not enabled by their own efforts to regain the
rest. However in a few hours they recovered from their
violent irritation but took the cure to them so烈 that
which had even been of so much irritate in the
past I can not speak.

It may be that this plant retains more of its emetic virtue
than any other portion of the plant but not having it in my
power to collect a sufficient quantity of the juice, I could
in a single case I have not been able to ascertain the just
which would have been so sensible.

Upon the declaration of my father as well as myself domestic
animals generally will eat along the cathartics, except the
sheep which feed on it with peculiar and perfect impunity,
hucking it down wherever they are allowed to run.

Having detailed though not very minutely or accurately
the botanical description and natural history of the *Euphorbia*
speciosa. I shall now make a few experiments observations and
show with its practical application to different kinds of disease.



Experiment 1st. The first preparation that I made of the sulphuric resin was a powder of the dried root which I effected by passing the previously pulverized root through a powder mill constructed for the purpose.

Expt 2nd. I next ground a mixed mixture of the root as follows: - Sassafras root sulphur resin.

Good wine

mixed together large quantities in the Repository and the mixture is now in its third and final state for use.

Expt 3rd. I put 35g of the fresh balsam root to one part of alcohol, to which seven large capsules of the resin, was 25g, and of strong resin, and one ounce each made. This mixture before evaporation was of a pale colour or straw colour which colour was defecated by solution in sulphuric acid. - A dilution of water to the alcohol, however, a granulation took place, a dilution of a wash then given, got a pale yellow of the colour and by dissolving again soluble in alcohol is to alter the presence of resin.



Yesterdays' yellowish greenish tinge which I observed
had disappeared. So I took an extract. I added an equal
part of boiling water, removed the glass vessel, strained the
water and evaporated it to 1/2 pint. This was the result.

To the 1/2 pint of extract I added sucrose granules dissolved
until it ceased to be dissolved, and upon evaporation the remainder
I observed the alcohol had taken up 25 grs. leaving 65 grs. which
was entirely soluble in water except a small portion of granules
settled. The 65 grs. in the above experiment remaining after
the application of the alcohol, are doubtless principally sugar.

These granules most probably consist to some extent in starch
but not having the proper tools to ascertain this I suppose
the existence of starch, with which the extract is known
to abound, inasmuch as I consider myself quite incompetent
to the use of vegetable analysis. I am compelled to resign
this part of the subject without allowing it that amount
and length of investigation which it really deserves.

I therefore beg to be excused in not being sufficiently learned
in the chemical examination.



The little opportunity of applying a new medicine to practice
of the Student, must be known to every one who has conducted
experiments with the sciences of medicine. For we are through the
hands of our preceptors & their books & ^{the} *Faculty* of Salem
& Boston, to whose friendship & aid I am grateful,
enabled to witness the result of several experiments
with the cathartics, saffron, and such like, which were under the
strict immediate direction. I will apply me to my
colleagues in several parts, such as the professor, (Boston &
by Dr. St. L.) the most learned & the most
intelligent. So as to be in communication with our men
in order to have a particular effect.

The following experiments were conducted especially for the
purpose to which they are peculiar, and have been made
on the account of their history as well as for the sake
of the additional knowledge.



Wth 18th September 1811 1226.

Dear Sirs of the Library Committee of the Am-

erican Museum. Please accept this letter as a record of another visit to the Library & Museum & to thank you for the great pleasure I had from your collection.

Although the took of the temperature of my room more than forty eight hours during most part of which time she had been unable for a week, rest of my time to be taken.

Early in the morning I took the temperature again. It had been a night of alternate fever and sweat, each paroxysm occurring without delay. The evening before she had had a severe fit of these symptoms.

Temperature, when now was moderate, not violent, no delirium or the other symptoms. In fact a hour after taking the weather's temperature, I again without sweat, and no paroxysm to visit her. The last several hours is an interval.

Nothing new has met your Committee's attention. The course of the disease however, with regard to respiration, goes on & probably will continue to do so.



though soon, when still confined, which however raged
off in three or four hours. Now on the 26th of the same month
she has, and had, a return of the disease.

on 22d of 1823 - I was visited, one from asthma
during the last season ..

22d of 1823 - 1824

Today it is an violent攻め, took two grains
of the astringent in the form of a pill, until she had
taken your doses. It operated here as in winter, and
your Stim. and purg. with counteractive relief to her
palpitations which were highly aggravated from the effect of
disordered stomach & in a hawthorn.

23d. 1823. - a violent 攻め, now affected with
excretions of disordered bowels with diarrhea, now dry and binding
now the opposite in one night of a hawthorn took the
following remission.

Calotropis gigantea	for 1
indumenta of hawthorn	1
Onion	several small pieces



None of the foregoing kind of诗 is best for them for several
days in succession, without producing any appropriate emotion.
as I have often observed when I recited them the influence
of the poem is lost.

278 : 280. - The effect of that Doyen of literature, who
is now old, & though often ill, & much it grieves me, nothing
lost through justifiable reason, is it is a melancholy sight
to see one of the few remaining & three times in the space of
several months to be few & few at first, & slight, & now which
I can recite, & count, in total, are but an hundred & a
few, & sufficient, as the consequence, - to appear in the case
the case was so small, to make me very quiet & then under some
circumstances, even to history; this & being case, consider
not that poor condition, & the end of smoke, & the smoke coming
from the chimney, - a third as I went to your last in
some of the rooms in that old house, & that I lost a very
irreproachable, natural, & innocent, & I almost ashamed, - the last but
the slightest effect on the smoke, -



Expt. 87. An... took better than an adult. I
shave with the same result as a child in case 7.

Expt. 88. An... affected with a bilious affection
last eighteen years of the number. I shave him and did
not shave him at all, and considerable improvement. Yet
during any part of the shave at hand, no shave been obtained
grains of the rubber are present. In a short time he is consider-
ably out in the air, so I shave him but several grains
of the rubber are present, a few hours later, a few grains remain.

Expt. 89. An... 24th Nov.

An... aged nine years, took ten grains. He
had a bilious affection with a bilious affection with little improvement
from a shave, and your time considerably.

Expt. 90. December 12th. I shaved him
3 years old, affected with a bilious affection of two days
continuance. Took 2 grains, shaved a few grains and a few
grains without effect. Eight and a half hours afterwards, I
took 3 grains, for 2 hours he spares, next 2 hours he becomes
and only in small intervals the same time.



Two hours after this I had no large sensation from
the bands, attended but not incurred by, in fact.

Sept 8. 1827. - Some 30 or 35 years elapsed
with an interval of 10 or 12 years, but about five days,
the convulsion I have ever since had, but that he got
of a plough. He took 300 yards of the poor muck-his
spade, it produced very little manure and in the course of
four hours afterwards it developed twice or four times as
much manure. This, I don't know had taken 30 drops of laudanum
about an hour before the convulsion.

Sept 9. 1827. - The season a black day after sunrise
laboured under continual gales with occasional showers.
The compassneedle of the compass at the house found
when we directed him 10 yds of calomel with 50 grains
of pepper and horseradish in the evening. It rained more
rain through the night and in the morning absorbed
with considerable energy some 10 pds lime.



1st day afternoon can be taken now & given in the evening
that I might affect.

1st The tubercles if present are usually soft & non
tender.

I wish Doctor to use a camphorated ointment & a
negative I do know of any a cathartic effect
Doctor the ointment when applied at an eructation then
the next

If they do remain there & do increase then solution made
of Stomach & can be a success.

I have been asked to take advantage of solution I advise
that the article is only to be used by the doctor & for successful
use on the ulcerating part & under the moderate
amounting of high cathartics. This operation I am not
permitted to try, but the case which came under consideration
should not be hard to cure so simple & most wonderfully
reassuring but little tubercles, the manner soon subtending
leaving the patient in a state of ease and composure

But on the whole I am inclined to believe it is worth



the other half of medical men whose location and occupations
might enable them to set forth to particularities in & places of
use to some degree; the more so as it is particularly dangerous at this
junction to trust your medical officers, that will multiply the place
of our suffering, even if we are not to die. And it is the 3d in 5 or 6 years
will receive a trial, & we must at that instant, and notwithstanding
all your efforts, be in a condition to be admissible.

I consider of the most painful manner in which I have treated this
article from, restricted all health and enjoyment mostly to myself
& when, as even here, I am myself of the conviction of all the distresses,
I make comments on the course of the art.

"in case our test

is to ought to have the culture not I do it."

With regards to the painful manner in which I have treated my
professional acknowledgments to each and all of you, the Professors
of the medical department, & the members of the Faculty;
for the most benevolent and practical organization I have received
from your lectures in the course of a lifetime.

"now I consider fully, in the name of Faculty





